

What is claimed is:

1. A disk array apparatus, comprising:

a plurality of disk modules, in each of which a disk for recording information and a controller for controlling operation of said disk are accommodated in a cabinet having a plane;

5 a plurality of disk boxes, each of which is configured by including an inlet ventilating surface and an exhaust ventilating surface arranged parallel to said inlet surface, and in each of which said plurality of disk modules are accommodated in line along a horizontal direction such that
10 said planes are orthogonal to said inlet surfaces;

a rack, in which a disk unit is formed by arranging two of said disk boxes along the horizontal direction such that said exhaust surfaces thereof face each other in parallel, and
15 in which a plurality of said disk units are accommodated in a stacking manner along a vertical direction, and of which surfaces facing said inlet surfaces of said disk boxes are capable of ventilation; and

an exhaust fan which is arranged in said rack and allows
20 air to pass through said inlet and exhaust surfaces of said disk boxes and to flow through a draft passage formed parallel to said exhaust surfaces in said rack to an outside of said rack,

wherein a heat radiation member is provided on each of
25 said planes of said disk modules.

2. A disk array apparatus according to claim 1,

wherein said disk boxes include exhaust ports formed on said exhaust surfaces, and

30 ends of said heat radiation members of said disk modules

protrude from said exhaust ports to said draft passage.

3. A disk array apparatus according to claim 2,

wherein said disk modules accommodated in a portion far
5 from said exhaust fan include said heat radiation members having
larger areas protruding from said exhaust ports to said draft
passage as compared with protruding areas of said heat radiation
members of said disk modules accommodated in a portion close
to said exhaust fan.

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4. A disk array apparatus according to claim 2,

wherein said exhaust fan is arranged in an upper portion
of said rack, and

said disk modules accommodated in a lower portion of said
15 rack include said heat radiation members having larger areas
protruding from said exhaust ports to said draft passage as
compared with protruding areas of said heat radiation members
of said disk modules accommodated in the upper portion.

20 5. A disk array apparatus according to any one of claims 1
and 2,

wherein said disk modules accommodated in a portion far
from said exhaust fan include said heat radiation members with
higher thermal conductivity as compared with thermal
25 conductivity of said heat radiation members of said disk modules
accommodated in a portion close to said exhaust fan.

6. A disk array apparatus according to any one of claims 1
and 2,

30 wherein said exhaust fan is arranged in an upper portion

of said rack, and

said disk modules accommodated in a lower portion of said rack include said heat radiation members with higher thermal conductivity as compared with thermal conductivity of said heat radiation members of said disk modules accommodated in the upper
5 portion.

7. A disk array apparatus according to claim 1,
wherein said disk boxes include:

10 exhaust ports formed on said exhaust surfaces; and
heat radiation plates protruding from said exhaust ports
to said draft passage,

wherein said heat radiation plates and said heat radiation
members of said disk modules are brought into contact with each
15 other.

8. A disk array apparatus according to claim 7,

wherein said disk boxes accommodated in a portion far from
said exhaust fan include said heat radiation plates having larger
20 areas protruding from said exhaust ports to said draft passage
as compared with protruding areas of heat radiation plates of
said disk boxes accommodated in a portion close to said exhaust
fan.

25 9. A disk array apparatus according to claim 7,

wherein said exhaust fan is arranged in an upper portion
of said rack, and

said disk boxes accommodated in a lower portion of said
rack include said heat radiation plates having larger areas
30 protruding from said exhaust ports to said draft passage as

compared with protruding areas of said heat radiation plates of said disk boxes accommodated in the upper portion.

10. A disk array apparatus according to claim 7,

5 wherein said disk boxes accommodated in a portion far from said exhaust fan include said heat radiation plates with higher thermal conductivity as compared with thermal conductivity of said heat radiation plates of said disk boxes accommodated in a portion close to said exhaust fan.

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11. A disk array apparatus according to claim 7,

wherein said exhaust fan is arranged in an upper portion of said rack, and

15 said disk boxes accommodated in a lower portion of said rack include said heat radiation plates with higher thermal conductivity as compared with thermal conductivity of said heat radiation plates of said disk boxes accommodated in the upper portion.

20 12. A disk array apparatus according to claim 7,

wherein said exhaust fan is arranged in an upper portion of said rack, and

25 material of said heat radiation plates included in said disk boxes accommodated in the upper portion is iron, and material of said heat radiation plates included in said disk boxes accommodated in a lower portion of said rack is aluminum.

13. A disk array apparatus according to claim 2,

30 wherein said heat radiation members of said disk modules are thermal conductive sheets.

14. A disk array apparatus according to claim 13,
wherein said thermal conductive sheets have electric
insulation properties.

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15. A disk array apparatus according to claim 13,
wherein the material of said thermal conductive sheets
is any of copper and silicon resin.